



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION:	AE3007A1/3	BYPASS RATIO:	4.8
UNIQUE ID NUMBER:	6AL012	PRESSURE RATIO ( $\pi_{00}$ ):	17.2
COMBUSTOR:	Type 2		
ENGINE TYPE:	MTF	RATED THRUST ( $F_{00}$ ) (kN):	33.1

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	17.3	86.0	51.4	0.0
AS % OF ORIGINAL LIMIT	88.4	72.9	69.0	0.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			86.3	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			88.2	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			89.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			95.0	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.359	0.00	0.00	21.26	0.0
CLIMB OUT	85	2.2	0.300	0.00	0.00	18.62	0.0
APPROACH	30	4.0	0.108	0.21	1.83	6.84	0.0
IDLE	7	26.0	0.045	5.23	32.40	3.29	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			151	372	2317	1465	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				11.3	70.1	44.3	0.0
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION	0	(kW)	AT	-	POWER SETTINGS
STAGE BLEED	0	(% CORE FLOW)	AT	-	POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.6-99.7
TEMPERATURE (K)	297-301
ABS HUMIDITY (kg/kg)	0.0115-0.0141

### FUEL

SPEC	Jet A
H/C	1.9
AROM (%)	16-20

MANUFACTURER: Rolls-Royce Corporation  
 TEST ORGANIZATION: Rolls-Royce Corporation  
 TEST LOCATION: Indianapolis, Indiana  
 TEST DATES: 28/08/2002-29/08/2002

### REMARKS

- For effectivity see Rolls-Royce Notice to Operators No. AE3007A-076
- Data in this form for AE3007A1/3 engine fitted with PAB fuel nozzles
- Results based on Rolls-Royce report EDR 19972

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)